values from each of a plurality of base stations. The results of each of the separate summing may be input to the decision unit 46. Alternatively, the results of the summing may be combined together in any suitable manner before being input to the decision unit 46.

The embodiments described hereinbefore have included three different methods:

1. determining the value of a power command using a threshold value;

2. summing the received power control values to determine if the mobile station should increase or decrease it power; and

3. integrating the power command values with respect to time and ignoring commands to increase power in certain conditions.

Embodiments of the present invention may incorporate one, any two or three of the above methods. In other words the first method can be used on its own, with the second method or the third method, or with both the second and third methods. The seocnd and third methods can also be used on their own or with each other.

Reference is made to Figures 5a to d which show simulations of the various methods. Each graph includes four curves. Curve A represents the prior art which uses the signal to interference ratio. Curve B represents a simulation using the first method. Curve C represent represents a simulation using the first and second methods. Curve D represents a simulation using the first, second and third methods. Figure 5a and 5b show the transmission power of a mobile station plotted against different threshold values for the first method. The mobile station is moving at 3km?h in both cases. With Figure 5a, the frame error rate is 1% whilst with Figure 5b the frame error rate is 10%. Figures 5c and 5d show the transmission power of a mobile station plotted against the speed of the mobile station. The frame error rate is 1% for the Figure 5c and 10% for Figure 5d.

As can be seen, use of the first method on its own reduces the

power transmitted by the mobile station significantly as compared to the prior art. The use of the first method in conjunction with the second method further reduces the power transmitted by the mobile station. The use of the first, second and third methods in combination still further reduces the power with which the mobile station transmits without altering the performance.

In the preferred embodiment of the present invention, the mobile station will always be instructed by a base station to increase or decrease its power in, for example, 1dB steps. However in alternative embodiments more than two power control commands may be provided. However additional threshold would have to be defined. For example, if three power control commands were available, two threshold would be defined. These three power control commands could be increase, decrease and stay the same.

It should be appreciated that any of the different method described hereinbefore can be used to determine whether or not a power control command value is reliable and accordingly whether or not the power control value should be considered or ignored.

The present embodiment has been described in the context of this CDMA system. However, it should be appreciated that embodiments of the present invention can be applied to any other suitable access technique including other spread spectrum techniques, frequency division multiple access, time division multiple access and hybrids thereof.

The embodiments described hereinbefore have controlled the power with which a mobile station transmits power. The present invention can also be used to control the transmission power of base stations. The invention can also be used with fixed stations, particularly where the radio environment varies over time.